AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-27 (canceled)

28.(new) A method for the treatment of infectious diseases, comprising administering to a subject in need thereof an effective amount of a live culture of a non pathogenic food grade probiotic bacterium.

29.(new) The method as claimed in claim 28 wherein the infectious disease is a localized infection of the skin.

30.(new) The method as claimed in claim 28, wherein the probiotic bacterium is a non-pathogenic lactic acid bacterium.

31.(new) The method as claimed in claim 30 wherein the lactic acid bacterium is a Lactococcus strain.

32.(new) The method as claimed in claim 31 wherein the Lactococcus strain is selected from the group consisting of; *Lactococcus lactis* DPC3147, and *Lactococcus lactis 5399, Lb. plantarum* DPC4922.

33.(new) The method as claimed in claim 28 wherein the disease is a mastitis infection.

34.(new) A method for the treatment of infectious diseases, comprising administering to a subject in need thereof an effective amount a freeze-dried preparation of a live culture of

a non-pathogenic food-grade probiotic bacterium.

35.(new) A method for the treatment of infectious disease comprising administering to a subject in need thereof an effective amount of a supernatant from a live culture of a non-pathogenic food-grade probiotic bacterium.

36.(new) The method as claimed in claim 35 wherein the infectious disease is a localized infection of the skin.

37.(new) The method as claimed in claim 35 wherein the probiotic bacterium is a non pathogenic lactic acid bacterium.

38.(new) The method as claimed in claim 37 wherein the lactic acid bacterium is a Lactococcus strain.

39.(new) The method as claimed in claim 38 wherein the Lactococcus strain is selected from the group consisting of; *Lactococcus lactis* DPC3147 and *Lactococcus lactis 5399, Lb. plantarum* DPC4922.

40.(new) The method as claimed in claim 30 wherein the disease is a mastitis infection.

41.(new) A method for the treatment of infectious diseases, comprising administering to a subject in need thereof an effective amount of a live culture of a non-pathogenic food-grade probiotic bacterium or the supernatant of a live culture of a non-pathogenic food-grade probiotic bacterium.

42.(new) The method as claimed in claim 41 wherein the infectious disease is mastitis.

43.(new) A live culture of a non-pathogenic food-grade probiotic

bacterium or the supernatant of a live culture of a non-pathogenic food-grade probiotic bacterium in a method of stimulation of the immune system.

44.(new) The method as claimed in claim 43 where the live culture or supernatant is used to stimulate PMN cells.

45.(new) A pharmaceutical composition comprising a pharmaceutically effective amount of a non-pathogenic live culture of a food-grade probiotic bacterium or a pharmaceutically effective amount of the supernatant of a live culture of a non-pathogenic food-grade probiotic bacterium together with a pharmaceutically acceptable carrier or diluent.

46.(new) A method of treating a subject having or at risk of developing infectious diseases comprising administering to a subject a pharmaceutically effective amount of a non-pathogenic live culture of a food-grade probiotic bacterium or the supernatant of a non pathogenic live culture of a food-grade probiotic bacterium.

47.(new) The method of treatment as claimed in claim 46 wherein the infectious disease is localised to the skin.

48.(new) The method of treatment as claimed in claim 46 wherein the infectious disease is localised to an infected wound.

49.(new) The method of treatment as claimed in claim 46 wherein the infectious disease is localised to the urinary tract.

50.(new) The method of treatment as claimed in claim 46 wherein the infectious disease is mastitis.

51.(new) The method as claimed in claim 28 whereby there is an

accelerated improvement in the quality of milk from cows with mastitis.